

**Notice of Allowability**

Application No.

10/076,540

Applicant(s)

YEE ET AL.

Examiner

Art Unit

Srirama Channavajjala

2166

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/27/06.
2. ☒ The allowed claim(s) is/are 1-2,6-7,17-18,22-24,28-29,33-34,38-39 [re-numbered as: 1-15].
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 02/17/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
Srirama Channavajjala  
Primary Examiner  
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### **DETAILED ACTION**

1. Examiner acknowledges applicant's response filed on 1/27/2006.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 August 2005 has been entered and a non-final Office action mailed on 09/22/2005
3. Claims 1,11,17,22,28,33 have been amended.
4. Examiner acknowledges applicant's amendment filed on 1/13/2005.
5. Claims 1,17,33 have been amended [1/13/2005].

### ***Drawings***

6. The drawings filed on 2/19/2002 are acceptable for examination purpose

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**Interview:**

7. Applicant's Attorney Michael A. Schwartz, Registration No. 40,161 is thanked for the telephone interview on 17 February 2006. During that telephone interview Michael A. Schwartz granted authorization to ***amend claims 1,17,22-23,28,33-34, 38-39, and cancel claims: 3-5,8-16,19-21,25-27,30-32,35-37,40-42;*** and amendment to the ***specification at page 23.***

**EXAMINER'S AMENDMENT**

8. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael A. Schwartz on 17 February 2006.

***The application has been amended as follows:***

**In the Specification:**

Please amend **specification Page 23** as follows:

skill in the art will appreciate that the processes of the present invention are capable of being distributed in the form of a computer readable storage medium of instructions ~~and a variety of forms and that the present invention applies equally regardless of the particular type of signal bearing media actually used to carry out the distribution.~~ Examples of computer readable storage media include recordable-type media such as floppy disc, a hard disk drive, RAM, and CD-ROM's. ~~as well as transmission type media, such as digital and analog communications links.~~

Although specific embodiments of the present invention have been described, it will be understood by those of skill in the art that there are other embodiments that are equivalent to the described embodiments. Accordingly, it is to be understood that the invention is not to be limited by the specific illustrated embodiments, but only by the scope of the appended claims.

**In the Claims:**

1. (currently amended) A method of automatically capturing data for trend analysis in a database management system comprising the steps of:

receiving a query for data from a database application;

issuing the received query to a database management system;

receiving a response to the query from the database management system,

wherein the response indicating a result dataset indicates a result data table;

automatically creating or updating a database table that is suitable for trend analysis, the database table comprising information upon which trend analysis is to be performed and information that is generated in order to perform the trend analysis, the database table arranged so that subsequent executions of the same query will cause the database table to be updated with the addition of a current retrieved result dataset so that multiple executions of the same database query cause database table to contain multiple retrieved result datasets upon which trend analysis is to be performed; and

populating or updating the database table with data from the result dataset and with timestamp information for each row of data in the result data table, wherein the populating or updating step comprises the steps of:

determining whether the result data table includes all rows of data in the result dataset;

retrieving all rows in the result dataset, if the result data table does not include all rows in the result dataset; and

for each row of data in the result data set, populating or updating a row in the database table with the row of data and with timestamp information.

2. (original) The method of claim 1, wherein the creating step comprises the steps of:

analyzing a format of the result dataset; and

creating the database table based on the format of the result dataset or updating an existing database table based on the format of the result dataset.

3. (cancelled)

4. (cancelled)

5. (cancelled)

6. (original) The method of claim 1, further comprising the step of determining whether the result dataset is to be captured for trend analysis; and wherein the creating or updating step comprises the step of creating or updating a database table that is suitable for trend analysis, if the result dataset is to be captured for trend analysis.

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7. (original) The method of claim 6, wherein the creating or updating step comprises the steps of:

analyzing a format of the result dataset; and

creating the database table based on the format of the result dataset or updating an existing database table based on the format of the result dataset.

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (cancelled)

12. (cancelled)

13. (cancelled)

14. (cancelled)

15. (cancelled)

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16. (cancelled)

17. (currently amended) A trendable database connectivity layer in a database management system operable to perform the steps of:

receiving a query for data from a database application;

issuing the received query to a database management system;

receiving a response to the query from the database management system,

wherein the response indicating a result dataset indicates a result data table;

automatically creating or updating a database table that is suitable for trend analysis, the database table comprising information upon which trend analysis is to be performed and information that is generated in order to perform the trend analysis, the database table arranged so that subsequent executions of the same query will cause the database table to be updated with the addition of a current retrieved result dataset so that multiple executions of the same database query cause database table to contain multiple retrieved result datasets upon which trend analysis is to be performed; and

populating or updating the database table with data from the result dataset and with timestamp information for each row of data in the result data table, wherein the populating or updating step comprises the steps of:

determining whether the result data table includes all rows of data in the result dataset;

retrieving all rows in the result dataset, if the result data table does not include all rows in the result dataset; and



for each row of data in the result data set, populating or updating a row in the database table with the row of data and with timestamp information.

18. (original) The trendable database connectivity layer of claim 17, wherein the creating step comprises the steps of:

analyzing a format of the result dataset; and

creating the database table based on the format of the result dataset or updating an existing database table based on the format of the result dataset.

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (currently amended) A database management system related to a database connectivity layer for trend analysis comprising:

a database operable to store and retrieve data;

a database application operable to utilize the database; and

a database connectivity layer operable to provide an interface between the database application and the database, wherein the database connectivity layer comprises:

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a database connectivity layer component operable to provide an interface between a database application and a database; and

a cover layer between the database connectivity layer component and the database application operable to capture and implement invocations by the database application of functions included in database connectivity layer component that create or update a database table that is suitable for trend analysis, the database table comprising information upon which trend analysis is to be performed and information that is generated in order to perform the trend analysis, the database table arranged so that subsequent executions of the same query will cause the database table to be updated with the addition of a current retrieved result dataset so that multiple executions of the same database query cause database table to contain multiple retrieved result datasets upon which trend analysis is to be performed, but pass through to the database connectivity layer component invocations by the database application of functions that do not involve trend analysis[.];

wherein the cover layer is further operable to perform the steps of populating or updating the database table with data from the result dataset and with timestamp information, wherein the populating or updating step comprises:

determining whether the result data table includes all rows of data in the result dataset;

retrieving all rows in the result dataset, if the result data table does not include all rows in the result dataset; and

for each row of data in the result data set, populating or updating a row in the database table with the row of data and with timestamp information.

23. (currently amended) The database management system of claim 22, wherein the populating or updating the database table with data from the result dataset comprises:

~~cover layer is further operable to perform the steps of:~~

- receiving a query for data from a database application;
- issuing the received query to a database management system;
- receiving a response to the query from the database management system, the response indicating a result dataset;
- determining whether the result dataset is to be captured for trend analysis;
- creating or updating a database table that is suitable for trend analysis; and
- populating or updating the database table with data from the result dataset.

24. (original) The database management system of claim 23, wherein the creating step comprises the steps of:

- analyzing a format of the result dataset; and
- creating the database table based on the format of the result dataset or updating an existing database table based on the format of the result dataset.

25. (cancelled)

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26. (cancelled)

27. (cancelled)

28. (currently amended) A database management system related to a database connectivity layer, comprising:

a database operable to store and retrieve data;

a database application operable to utilize the database; and

a trendable database connectivity layer operable to perform the steps of:

receiving a query for data from a database application;

issuing the received query to a database management system;

receiving a response to the query from the database management system,

wherein the response indicating a result dataset indicates a result data table;

automatically creating or updating a database table that is suitable for trend analysis, the database table comprising information upon which trend analysis is to be performed and information that is generated in order to perform the trend analysis, the database table arranged so that subsequent executions of the same query will cause the database table to be updated with the addition of a current retrieved result dataset so that multiple executions of the same database query cause database table to contain multiple retrieved result datasets upon which trend analysis is to be performed; and

populating or updating the database table with data from the result dataset and  
with timestamp information for each row of data in the result data table, wherein the  
populating or updating step comprises the steps of:

determining whether the result data table includes all rows of data in the result  
dataset;

retrieving all rows in the result dataset, if the result data table does not include all  
rows in the result dataset; and

for each row of data in the result data set, populating or updating a row in the  
database table with the row of data and with timestamp information.

29. (original) The database management system of claim 28, wherein the creating step  
comprises the steps of:

analyzing a format of the result dataset; and

creating the database table based on the format of the result dataset or updating  
an existing database table based on the format of the result dataset.

30. (cancelled)

31. (cancelled)

32. (cancelled)

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33. (currently amended) A computer program product for automatically capturing data for trend analysis in an electronic data processing system, comprising:

a computer readable storage medium;

computer program instructions, recorded on the computer readable storage medium, executable by a processor, ~~for performing the steps of~~ comprising:

instructions for receiving a query for data from a database application;

instructions for issuing the received query to a database management system;

instructions for receiving a response to the query from the database management system, wherein the response indicating a result dataset indicates a result data table;

instructions for automatically creating or updating a database table that is suitable for trend analysis, if the database table does not already exist, the database table comprising information upon which trend analysis is to be performed and information that is generated in order to perform the trend analysis, the database table arranged so that subsequent executions of the same query will cause the database table to be updated with the addition of a current retrieved result dataset so that multiple executions of the same database query cause database table to contain multiple retrieved result datasets upon which trend analysis is to be performed; and

instructions for populating or updating the database table with data from the result dataset and with timestamp information for each row of data in the result data table, wherein the instructions for populating or updating comprises:

instructions for determining whether the result data table includes all rows of data in the result dataset;

instructions for retrieving all rows in the result dataset, if the result data table does not include all rows in the result dataset; and

for each row of data in the result data set, instructions for populating or updating a row in the database table with the row of data and with timestamp information.

34. (currently amended) The computer program product of claim 33, wherein the instructions for creating ~~step~~ comprises ~~the steps of~~:

instructions for analyzing a format of the result dataset; and

instructions for creating the database table based on the format of the result dataset or updating an existing database table based on the format of the result dataset.

35. (cancelled)

36. (cancelled)

37. (cancelled)

38. (currently amended) The computer program product of claim 33, further comprising instructions for ~~the step of~~ determining whether the result dataset is to be captured for trend analysis; and wherein the instructions for creating or updating ~~step~~ comprises ~~the~~

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~~step of~~ instructions for creating or updating a database table that is suitable for trend analysis, if the result dataset is to be captured for trend analysis.

39. (currently amended) The computer program product of claim 38, wherein the

instructions for creating or updating ~~step~~ comprises ~~the steps of~~:

instructions for analyzing a format of the result dataset; and

instructions for creating the database table based on the format of the result dataset or updating an existing database table based on the format of the result dataset.

40. (cancelled)

41. (cancelled)

42. (cancelled)



***Reasons for allowance***

Claims 1-2,6-7,17-18,22-24,26,28-29,33-34,38-39 are allowed

The following is an examiner's statement of reasons for indication of allowable subject matter:


The newly cited prior art "Effective timestamping in databases" issued to Kristian Torp et al. is directed to timestamping for capturing transaction, specifically effective approach to timestamping of data that may be used directly within a stratum, which is a layer on top of a database management system that translates statements in a temporal query language into conventional SQL [see Abstract].

The newly cited prior art WO 03/023656 A1 Joseph, Paul et al. published on March 20,2003 is directed to database interface architecture with time-based load balancing in a real-time environment, more specifically load-dependent handling database transaction requests includes receiving database transaction, transferring from the intermediate storage device selected ones of the database transaction requests to a database for updating corresponding records in the database [fig 1-2, Abstract, page 2, line 20-30, page 3, line 1-2].

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

SC  
*Patent Examiner.*  
February 17, 2006.

  
SRIRAMA CHANNAYYALA  
PRIMARY EXAMINER